011 Scope Triggering Aid for Video Signals

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This small circuit is useful for investigation and testing video signals. It allows you to select different triggering points on a VGA synchronisation signal by simply adjusting the trigger level of the oscilloscope. The trigger points are as follows (from the highest to the lowest trigger level):

- Triggering on the back edge of the vertical sync signal.
- Triggering on the back edge of the horizontal sync signal.
- Triggering on the front edge of the horizontal sync signal.
- Triggering on the front edge of the vertical signal.

The circuit could hardly be simpler; it consists of two capacitors and one resistor. C1 and R1 form a differentiating net-

work with a time constant conforming to the vertical sync signal; likewise, C2 and R1 perform the same function on the horizontal sync signal. In the accompanying diagram, it can be seen how the combined trigger pulse output is derived from the edges of the two sync signals.
The pin numbers given in the diagram refer to a 15-pin PC video connector (DC15HD). It is possible to mount the three components of this circuit directly onto the PCB side of the graphic card video connector, in which case you can use pin 15 (normally unused) as the trigger signal output. (004051-1)